

Joint meeting of the Western Cape branches of INCOSE and the System Dynamics Society – 20 August 2015

By Paul de Villiers



The Western Cape Branch recently hosted a joint meeting with the System Dynamics Society where Professor Alan Brent was our speaker. Although the South African chapter of the System Dynamics Society is still in its infancy, it was good to engage with a few new faces. The event was attended by 25 people.

Suja Joseph-Malherbe presented feedback on the INCOSE International Symposium, followed by an overview of INCOSE, before introducing Alan Brent,

who gave a brief overview of the System Dynamics Society ahead of his presentation. Alan Brent is a Professor of Engineering Management and Sustainable Systems at the University of Stellenbosch and is also currently the president of the South African Chapter of the System Dynamics Society.

His topic, "Using System Dynamics to investigate transition and investment scenarios: The Western Cape Green Economy Model (WeCaGEM)" was the culmination of a body of research performed by himself, Dr Josephine Musango and several of their students. The allotted time was only sufficient to scratch the surface of the work performed and it would be well worth revisiting the presentation and the paper when it becomes available on <http://iono.fm/c/123>.

Alan presented a system model that considered Events, the resulting Behaviour and eventually the emerging Technology to address the impact of the events. The model was applied at an international and then a South African level. The current events in the international arena have been termed a "polycrisis", of which climate change is fundamental to most of the other challenges facing the world. The presentation then explored the behaviour of the international community to address these challenges. Lastly, developments in technology were presented, particularly in the energy sector.



South Africa recently saw the publication of the South African Risk and Vulnerability Atlas, commissioned by the Department of Science and Technology. This and other inputs have given rise to numerous action plans, i.e. behaviours, to try and address our challenges at a local level.

The second part of the presentation dealt with the Western Cape Green Economy Model, which was commissioned by the Western Cape Government to identify approaches and the investments required to transition the province to a green, or sustainable, economy. Students had performed research and built scenarios to determine the effects of investments in infrastructure, agriculture, water and energy.

As always, the challenge lies in the implementation well-researched conclusions and the hope that the unintended consequences of complexity will be of the positive kind!

The meeting was concluded in the traditional way, followed by good discussions over snacks and a glass of wine. Professor Brent agreed to promote INCOSE events among his students, which will hopefully even out the age demographic at future meetings!

